

# Congress of the United States

Washington, DC 20515

January 14, 2010

Gene Dodaro  
Acting Comptroller General of the United States  
Government Accountability Office  
441 G Street, NW  
Washington, D.C. 20548

Dear Mr. Dodaro:

We are writing to request that the Government Accountability Office (GAO) commence a review of the policies and procedures of the Nuclear Regulatory Commission (NRC) regarding the integrity, safety, inspection and maintenance of buried piping at our nation's nuclear power plants. The recent discoveries of leaks of reactor cooling water, diesel fuel and radioactive water at several plants suggest that NRC processes must be improved to help licensees adequately manage the aging of this infrastructure to ensure the safety of the reactors and of the public.

For example, just one week after the 40-year-old Oyster Creek (NJ) reactor's license was extended for another 20 years, plant workers discovered standing water in an on-site cable vault. This water, apparently leaking from two different buried pipes, was contaminated with the radioactive isotope tritium.<sup>1</sup> A similar leak, this time in buried pipes that are part of the auxiliary feed water system, occurred last February at Indian Point (NY).<sup>2</sup> Indeed, these cases are not isolated incidents. Other known or suspected leaky pipes, tanks or pipe fittings at our nation's nuclear power plants were found at San Onofre (CA),<sup>3</sup> Byron (IL),<sup>4</sup> Perry (OH),<sup>5</sup> Dresden (IL)<sup>6</sup> and Braidwood (IL).<sup>7</sup>

These repeated failures, often identified only after thousands of gallons of fluid have escaped, suggest that even now there may be undetected, active leaks from buried piping at one or more of our nation's nuclear power plants. The integrity of buried piping has implications, not only for today's public safety, but for future costs incurred during plant decommissioning. Unforeseen

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<sup>1</sup> Exelon Report, "Tritium Identified in Emergency Service Water (ESW) Vault." June 5<sup>th</sup>, 2009.

<sup>2</sup> <http://www.nytimes.com/2009/05/02/nyregion/02nuke.html>

<sup>3</sup> <http://articles.latimes.com/2006/aug/18/local/me-radioactive18>

<sup>4</sup> <http://www.wifr.com/news/headlines/10817731.html>

<sup>5</sup> [http://www.cleveland.com/business/index.ssf/2009/11/firstenergy\\_restarts\\_perry\\_nuc.html](http://www.cleveland.com/business/index.ssf/2009/11/firstenergy_restarts_perry_nuc.html)

<sup>6</sup> <http://www.chicagobreakingnews.com/2009/06/exelon-radioactive-leak-contained-not-in-water-supply.html>

<sup>7</sup> <http://www.morrisdailyherald.com/articles/2009/12/04/94978024/index.xml>

contamination cleanup due to leaky pipes would have a dramatic negative impact not only on the ability of licensees to fully and effectively complete the decommissioning process, but on local property values, community plans for the site, and actual or perceived threats to public health.

The NRC staff's assessment of these questions, laid out in a December 2, 2009 letter<sup>8</sup> from the NRC Director of the Office of Nuclear Reactor Regulation to the Commissioners, stated that current NRC regulations are adequate, that the NRC staff have no new proposals for changes to the buried piping regulations, and that the NRC staff will monitor licensee implementation of industry buried piping initiatives. Although this report recommends no changes to any NRC regulations or protocols, we feel that the repeated pipe failures indicate a growing problem with an aging part of plant infrastructure that must be proactively managed to ensure continued safety.

We have serious questions about the NRC's buried pipe inspection processes, NRC's current relevant regulations, and whether they are both adequate and enforced in a manner that is sufficiently protective of reactor and public safety. We ask that your examination of the NRC's policies and procedures relating to this subject include an assessment of the following questions:

#### ***Existing NRC Regulations***

- 1) What does the NRC require of their licensees regarding the monitoring and inspection of underground piping systems?
- 2) For example, how often are inspections mandated and what percentage of total buried pipe length must be examined during the inspection interval?
- 3) What inspection techniques are permitted?
- 4) Do those inspections focus on those piping sections most likely to fail, such as elbows and welds?
- 5) Do NRC requirements vary depending on the underground environment at individual reactor sites (e.g., the more moist, saline seaside environment at Pilgrim that might accelerate pipe corrosion)?

#### ***Enforcement of NRC Regulations***

- 1) How does the NRC ensure that these regulations are being met by its licensees?
- 2) What is the frequency with which NRC Inspectors conduct onsite examinations of buried piping conditions?
- 3) What are the potential enforcement consequences if a licensee fails to implement NRC regulations correctly, and does NRC regularly undertake enforcement actions regarding these matters?
- 4) Does the NRC monitor compliance with the licensee's own protocols for the management of aging reactor components and systems (if buried piping is included in their assessments)?

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<sup>8</sup> Leeds, Eric J. "Staff Progress in Evaluation of Buried Piping at Nuclear Reactor Facilities." 2 December 2009. SECY-09-0174.

***Adequacy of NRC Regulations***

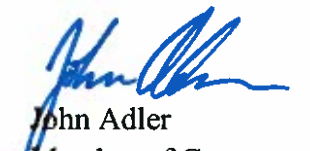
- 1) Are the NRC regulations sufficient to ensure the safety and integrity of underground piping systems?
- 2) Are there different requirements that have been developed or contemplated for future nuclear power plants to better manage the risks of underground piping systems (e.g., placing pipes in trenches or above ground)?
- 3) Can industry initiatives<sup>9</sup> in this area be as effective and enforceable as NRC regulations? Why or why not?

Thank you for your prompt attention to this request. If you have any questions or concerns please contact us, or have your staff contact Dr. Katie Matthews of Rep. Markey's office at (202) 225-2836, Jim Bradley of Rep. Hall's office at (202) 225-5441, or Nancy Sopko of Rep. Adler's office at (202) 225-4765. We look forward to your response.

Sincerely,

  
Edward Markey  
Member of Congress

  
John Hall  
Member of Congress

  
John Adler  
Member of Congress

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<sup>9</sup> E.g., Nuclear Energy Institute's "Buried Piping Integrity Initiative" and Electric Power Research Institute's "Buried Pipe Integrity Group"